

City of Carlsbad

Jurisdictional Urban Runoff Management Plan

Executive Summary

The City of Carlsbad has prepared this Jurisdictional Urban Runoff Management Plan as described in Sections F and H of the Municipal Storm Water Permit (NPDES Order No. 2001-01) issued by the San Diego Regional Water Quality Control Board on February 21, 2001.

The San Diego Regional Water Quality Control Board issued the Municipal Storm Water Permit Order No. 2001-01, NPDES No. CAS018758 on February 21, 2001, to prevent waste discharges from the Municipal Separate Storm Sewer System (MS4) from draining into the watersheds of the County of San Diego, the Incorporated cities of San Diego County and the San Diego Unified Port District. There are 20 Copermittees listed in the Order.

This Order describes all requirements, including the content of the Jurisdictional Urban Runoff Management Plan (JURMP) to be prepared and submitted to the San Diego Regional Water Quality Control Board by each and all the Copermittees.

The City of Carlsbad (City) will initiate implementation of the JURMP on February 21, 2002, and will use a continuous improvement and refinement strategy to identify changes to the JURMP through the life of the Permit.

The improvements are expected to contribute to an “evolving” document that will change as technology advances (i.e. BMPs, analytical testing, etc.) and the environmental conditions in the Watershed vary.

Through the mechanism of annual reporting, the major changes in the 2002 Carlsbad JURMP, are expected to be identified and submitted to the regulatory agencies in subsequent years.

The City of Carlsbad formed several teams composed of City staff from various departments to develop and implement this JURMP. With assistance from contractors and consultants, this JURMP has been developed to address the requirements of the Permit. This JURMP will be implemented Citywide with guidance and leadership from the Storm Water Protection Program located in the Public Works Department.

The JURMP is composed of twelve components (Sections 2-13 in this document) that outline the City’s action plans to meet compliance with the Permit requirements. Each of the twelve components are designed as “stand alone” documents that include:

- Purpose
- Permit Requirements
- JURMP Requirements
- City Action Plan

Where appropriate, an action plan is associated with percentage goals to indicate intended improvements during the five-year permit term. A comprehensive discussion of JURMP assessment and performance measurements is found in Section 11.

The twelve Components of the JURMP are briefly summarized below:

Municipal (Existing Development) Component - Section 2.

Describes the inventory of City of Carlsbad Municipal Facilities which includes administration buildings, recreational areas, buildings, maintenance yards, water reservoirs, water pump stations, sewer lift stations, a road system, parking facilities, the storm drain system, pressure regulator vaults, and fire stations. These are areas where Municipal staff work or provide a specific service. This section discusses Permit requirements that apply to the Municipal Component (areas and activities) of the JURMP and actions proposed by the City of Carlsbad. This section also outlines strategies for the City to implement Best Management Practices (BMPs) at each facility or for certain activities.

Industrial (Existing Development) Component- Section 3.

This section discusses Permit requirements that apply to the Industrial Component of the JURMP and the City's Action Plan to meet or exceed the requirements as specified in the Permit.

The City currently has over 1,000 industrial facilities operating within its jurisdiction based on criteria described in the Permit. Major industry types in Carlsbad include high technology, multimedia and biomedical businesses, electronics, golf apparel and equipment manufacturers and several light industry parks. Industrial activities can often contribute to the degradation of receiving water quality when performed with disregard for the environment. The Permit requires the City to develop and implement a program to reduce pollutant runoff from industrial sites within its jurisdiction. A comprehensive database of all industrial facilities within the City has been compiled and prioritized based on potential threat to water quality. Potential threats to water quality at each industrial facility were determined by evaluating a variety of site-specific factors according to the criteria outlined in the Permit. Using this method, the inventory of industrial facilities was prioritized into 188 "high" threat, 318 "medium" threat, and 496 "low" threat sites. The prioritization will determine the appropriate minimum BMPs, inspection frequencies, and monitoring requirements. The permit requires a yearly inspection of all "high" priority facilities.

Commercial (Existing Development) Component - Section 4.

This section discusses Permit requirements that apply to the Commercial Component of the JURMP and actions proposed by the City to minimize polluted runoff. The City's Action Plan described in this section meets or exceeds compliance with the Permit requirements

The City currently has over 500 high priority commercial facilities operating within its jurisdiction. Commercial facilities can generate a variety of pollutants depending on the activities performed. Automobile maintenance, carpet cleaning, and landscaping activities have the potential to generate significant amount of pollutants, if performed with disregard to the environment. Even small quantities of these pollutants can combine in the storm water conveyance system and cause significant degradation to receiving waters. In order to determine specific potential sources, a comprehensive database of commercial facilities within the City has been compiled and "high" priority facilities have been selected based on threat to water quality. Currently, 525 "high" priority commercial facilities have been identified within the City that meet the criteria

listed below. This prioritization process will determine the number of site inspections to be conducted and the appropriate minimum BMPs for the commercial sites and sources.

The permit defines the following twenty-two (22) types of commercial sites/sources that must be considered a high priority threat to water quality:

1. Automobile mechanical repair, maintenance, fueling or cleaning;
2. Airplane mechanical repair, maintenance, fueling, or cleaning;
3. Boat mechanical repair, maintenance, fueling, or cleaning;
4. Equipment repair, maintenance, fueling, or cleaning;
5. Automobile and other vehicle body repair or painting;
6. Mobile automobile or other vehicle washing;
7. Automobile (or other vehicle) parking lots and storage facilities;
8. Retail or wholesale fueling;
9. Pest control services;
10. Eating or drinking establishments;
11. Mobile carpet, drape or furniture cleaning;
12. Cement mixing or cutting;
13. Masonry;
14. Painting and coating;
15. Botanical or zoological gardens and exhibits;
16. Landscaping;
17. Nurseries and greenhouses;
18. Golf courses, parks and other recreational areas/facilities;
19. Cemeteries;
20. Pool and fountain cleaning;
21. Marinas; and
22. Port-a-potty servicing.

Residential (Existing Development) Component - Section 5.

The City encompasses approximately 42 square miles and, as of January 1, 2001, the population of Carlsbad was approximately 83,469. By the year 2010, it is estimated that there will be nearly 54,599 residential units in Carlsbad, housing approximately 135,000 residents. To varying degrees, the residential community contributes to water quality degradation and therefore plays a part in the solution. This section discusses Permit requirements that apply to the Residential Component (areas and activities) of the JURMP and meets or exceeds minimum requirements as specified in Section H of the Permit.

Land-Use Planning for New Development and Redevelopment Component – Section 6.

This Component discusses Order No. 2001-01 requirements that apply to Land-Use Planning for New Development and Redevelopment (areas and activities) of the JURMP and the Action Plan proposed to meet or exceed the requirements as specified in Section H of the Permit. The main elements of the component are:

1. Assessment of General Plan (Section 6.1)
2. Modification Development Project Approval Process (Section 6.2)
3. Revisions to Environmental Review Process (Section 6.3)
4. Education on New Development and Redevelopment (Section 6.4)

Construction Component - Section 7.

This section discusses Permit requirements that apply to the Construction Component of the JURMP and activities proposed by the City for compliance with Order 2001-01 (Permit). This section meets or exceeds minimum requirements as specified in Section H and Section F.2.a. of the Permit. This Section addresses short and long-term impacts from urban runoff at construction sites and how the City will minimize those impacts on receiving water quality by presenting Action plans for:

1. Pollution Prevention (Section 7.1)
2. Grading Ordinance Update (Section 7.2)
3. Modify Construction and Grading Approval Process (Section 7.3)
4. Source Identification (Section 7.4)
5. Threat to Water Quality Prioritization (Section 7.5)
6. Best Management Practices Implementation (Section 7.6)
7. Inspection of Construction Sites (Section 7.7)
8. Enforcement of Construction Sites (Section 7.8)
9. Reporting of Non-compliant Sites (Section 7.9)
10. Education on Construction Activities (Section 7.10)

Illicit Discharges Detection and Elimination Component - Section 8.

The Permit requires the establishment of an Illicit Discharge Detection and Elimination (IDD&E) Component within the JURMP. The IDD&E Component actively seeks and eliminates illicit discharges and connections within the city. The following subsection addresses IDD&E impacts to storm water quality, activities to investigate, eliminate and prevent illicit discharges and enforcement to maintain consistency in application throughout the City. This component meets or exceeds minimum requirements as specified in Section H of the Permit.

- Illicit Discharges and Connections (Section 8.1)
- Dry Weather Analytical Monitoring (Section 8.2)
- Investigation/Inspection and follow-up (Section 8.3)
- Elimination of Illicit Discharges and Connections (Section 8.4)
- Enforce Ordinance (Section 8.5)
- Prevent and Respond to Sewage Spills and Other Spills (Section 8.6)
- Public Reporting of Illicit Discharges and Connections (Section 8.7)
- Disposal of Used Oil and Toxic Materials (Section 8.8)
- Limiting Infiltration from Sanitary Sewer to MS4 (Section 8.9)

Outreach and Education Component - Section 9.

Education is the foundation of any successful Urban Runoff Management Plan. It is imperative that the public and City employees understand how storm water pollution impacts water quality. The City of Carlsbad is revising and updating its Outreach and Education Plan to meet the Education Component (F.4) of the Permit. This section discusses Permit requirements that apply to the Outreach and Education Component of the JURMP and methodologies that will be employed to accomplish outreach and education for each of the targeted communities. This section meets or exceeds minimum requirements as specified in Section F.4 of the Permit. The following subsections address short and long-term efforts including all outreach and education activities and how the City of Carlsbad will maximize its efforts to provide a benefit to receiving water quality:

- Municipal Department and Personnel (Section 2.1)
- Construction Site Owners and Developers (Section 2.2)
- Industrial Owners and Operators (Section 2.3)
- Commercial Owners and Operators (Section 2.4)
- Residential Community, General Public, and School Children (Section 2.5)
- Quasi-Government Agencies/Districts (i.e., educational institutions, waters districts, sanitation districts, etc.) (Section 2.6)

Public Participation Component - Section 10.

The City is enhancing its efforts to meet the Public Participation Component (F.6) of the Permit. This section discusses Permit requirements that apply to the *Public Participation Component* of the JURMP and methodologies to be employed for citizens, interested parties, and elected officials during implementation of the JURMP.

Assessment of Jurisdictional URMP Effectiveness Component - Section 11.

This section discusses Permit requirements that apply to the *Assessment of JURMP Effectiveness Component* and methodologies to be employed that assess the effectiveness of this JURMP document. This section also provides data to support changes in the plan during the course of the year, or the life of the Permit.

Fiscal Analysis Component - Section 12.

This section discusses Permit requirements that apply to the *Fiscal Analysis Component* of the JURMP and methodologies to be employed to accomplish the goals of the Storm Water Protection Program. This section also discusses methods to secure funding for on-going expenditures. This section meets or exceeds minimum requirements as specified in Section H of the Permit. The fiscal implications of the requirements of NPDES Order 2001-01 are significant and as an unfunded mandate presents the City with a financial challenge.

Historically, all costs to manage the City's Urban Runoff Management Program (URMP) activities have been funded from one of two funding sources. All maintenance and operation, education and administrative expenditures have been funded through the City's General Fund. Storm water facility capital expenditures are generally funded from developer revenues generated from the City's adopted Local Drainage Area Fee program or the City's General Fund. Occasionally, new drainage facilities or repairs and/or rehabilitation of existing drainage facilities are funded from other road-related funding resources such as the Gas Tax or TransNet sales tax revenues. Total appropriations for FY 2001-02 for drainage capital facilities, including carry forward amounts, was \$4,112,476 (See attached budget table).

Beginning in the FY 2001-02 Operating Budget, the City established a separate special revenue account for storm water protection (See attached budgetary sheets). These special revenue funds pay for all non-capital expenditures for the City's URMP including sampling, testing, inspection, enforcement, education and administration. The total FY 2001-02 budget for these activities was \$1,873,190. Additional expenditures for maintenance and operation of the City's URMP activities, including street sweeping, storm drain and inlet cleaning, basin maintenance and pollutant filter replacement are incorporated in the City's Street Maintenance budget funded by the General Fund.

The City's strategy is to continue funding of all URMP activities from the General Fund and to identify and evaluate alternative funding sources. Funding for any additional URMP activities necessitated by this new

Regional Board Order will for the time being be funded from the City's General Fund. At the present time, the City has retained the services of a consulting engineering and financial services company to prepare an Alternative Financing Mechanism Study. This study will include research of potential funding sources, a survey of comparable agencies, an analysis of the funding options and recommended options for additional funding. Once the study is complete, it will be forwarded to the City Council for approval and to recommend actions. The recommendations will be incorporated into the City's FY 2002-03 goals and budgetary process. The City will make an effort to implement the recommended actions during the next fiscal year.

With regards to future capital facility expenditures, the City intends to update the Master Drainage and Storm Water Quality Management Plan (Master Drainage Plan). This plan identifies needed improvements to the City's storm drainage infrastructure and establishes a cost structure included in the City's Local Drainage Area Fee program. The updated Master Drainage Plan will include provision for necessary URMP facilities. Once the Master Drainage Plan is completed, the City will revise the Local Drainage Area Fees accordingly.

Non-emergency Fire Fighting Component - Section 13

The City has developed the Non-Emergency Fire Fighting Component to meet Prohibitions of Non-Storm Water Discharges for Fire Fighting Flows in Section B.4 of the Permit. This section discusses Permit requirements that apply to the *Non-Emergency Fire Fighting Component* of the Jurisdictional Urban Runoff Management Plan (JURMP) and the methodologies employed to meet or exceed minimum requirements as specified in Section B.4 of the Permit.